

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 065905-0248

In re patent application of

Takafumi NAKAHAMA

Serial No.: Unassigned

Filed: February 8, 2002

For: COOLING DEVICE FOR HEAT STRUCTURE

PRELIMINARY AMENDMENT

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Prior to examination of the above-identified application, Applicant respectfully requests that the following amendments be entered into the application:

**IN THE SPECIFICATION:**

Please amend the specification of the application as follows:

Please replace the paragraph on page 5, lines 15 through 16, with the following:

--Figures 1A through 1C show cross-sectional views of a prior art cooling device for a heat source;--

Please replace the paragraph on page 5, lines 17 through 19, with the following:

--Figures 2A through 2C show cross-sectional views of a cooling device for a heat source according to a first embodiment of the present invention;--

Please replace the paragraph on page 5, lines 20 through 22, with the following:

--Figures 3A through 3C show cross-sectional views of a cooling device for a heat source according to a second embodiment of the present invention;--

Please replace the paragraph on page 5, lines 23 through 25, with the following:

--Figures 4A through 4C show cross-sectional views of a cooling device for a heat source according to a third embodiment of the present invention;--

Please replace the paragraph on page 6, lines 1 through 3, with the following:

--Figures 5A through 5C show cross-sectional views of a cooling device for a heat source according to a fourth embodiment of the present invention;--

Please replace the paragraph on page 6, lines 4 through 6, with the following:

--Figures 6A through 6C show cross-sectional views of a cooling device for a heat source according to a fifth embodiment of the present invention;--

Please replace the paragraph on page 6, lines 7 through 9, with the following:

--Figures 7A through 7C show cross-sectional views of a cooling device for a heat source according to a sixth embodiment of the present invention;--

Please replace the paragraph on page 6, lines 10 through 12, with the following:

--Figures 8A through 8C show cross-sectional views of a cooling device for a heat source according to a seventh embodiment of the present invention;--

Please replace the paragraph on page 6, lines 13 through 15, with the following:

--Figures 9A through 9C show cross-sectional views of a cooling device for a heat source according to an eighth embodiment of the present invention;--

Please replace the paragraph on page 6, lines 16 through 18, with the following:

--Figures 10A through 10C show cross-sectional views of a cooling device for a heat source according to a ninth embodiment of the present invention;--

Please replace the paragraph on page 6, lines 19 through 21, with the following:

--Figures 11A through 11C show cross-sectional views of a cooling device for a heat source according to a tenth embodiment of the present invention;--

Please replace the paragraph on page 6, lines 22 through 24, with the following:

--Figures 12A through 12C show cross-sectional views of a cooling device for a heat source according to an eleventh embodiment of the present invention;--

Please replace the paragraph on page 7, lines 1 through 3, with the following:

--Figures 13A through 13C show cross-sectional views of a cooling device for a heat source according to a twelfth embodiment of the present invention;--

Please replace the paragraph on page 7, lines 4 through 6, with the following:

--Figures 14A through 14C show cross-sectional views of a cooling device for a heat source according to a thirteenth embodiment of the present invention;--

Please replace the paragraph on page 7, lines 7 through 9, with the following:

--Figures 15A through 15C show cross-sectional views of a cooling device for a heat source according to a fourteenth embodiment of the present invention;--

Please replace the paragraph on page 7, lines 13 through 15, with the following:

--Figures 17A through 17C show cross-sectional views of a cooling device for a heat source according to a sixteenth embodiment of the present invention; and--

#### **IN THE CLAIMS:**

Please replace Claims 5, 6, and 9 with the following amended claims:

--5. (Amended)        The cooling device for the heat source according to claim 2, wherein said upright plate provided on the downstream side of said header is provided offset from a center of said hole.

6. (Amended)        The cooling device for a heat source according to claim 1, wherein a gap between said upright plate provided on a downstream side of said header and a wall face on a side of said header opposite said holes is eliminated.

9. (Amended)        The cooling device for a heat source according to claim 6,

wherein a gap between said baffle plate provided on an upstream side of said holes within said heat sink and said wall face on a side of said heat sink opposite said holes is eliminated.--

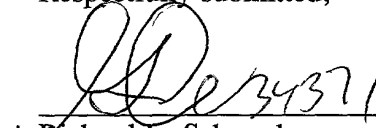
#### REMARKS

Entry of the foregoing amendments prior to examination is respectfully requested.  
A marked-up version of the paragraphs and claims showing the changes made is attached.

Respectfully submitted,

February 8, 2002

Date

  
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**VERSIONS WITH MARKINGS TO SHOW CHANGES MADE**

Paragraph on page 5, lines 15 through 16:

[Figure 1 shows] Figures 1A through 1C show cross-sectional views of a prior art cooling device for a heat source;

Paragraph on page 5, lines 17 through 19:

[Figure 2 shows] Figures 2A through 2C show cross-sectional views of a cooling device for a heat source according to a first embodiment of the present invention;

Paragraph on page 5, lines 20 through 22:

[Figure 3 shows] Figures 3A through 3C show cross-sectional views of a cooling device for a heat source according to a second embodiment of the present invention;

Paragraph on page 5, lines 23 through 25:

[Figure 4 shows] Figures 4A through 4C show cross-sectional views of a cooling device for a heat source according to a third embodiment of the present invention;

Paragraph on page 6, lines 1 through 3:

[Figure 5 shows] Figures 5A through 5C show cross-sectional views of a cooling device for a heat source according to a fourth embodiment of the present invention;

Paragraph on page 6, lines 4 through 6:

[Figure 6 shows] Figures 6A through 6C show cross-sectional views of a cooling device for a heat source according to a fifth embodiment of the present invention;

Paragraph on page 6, lines 7 through 9:

[Figure 7 shows] Figures 7A through 7C show cross-sectional views of a cooling device for a heat source according to a sixth embodiment of the present invention;

Paragraph on page 6, lines 10 through 12:

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[Figure 8 shows] Figures 8A through 8C show cross-sectional views of a cooling device for a heat source according to a seventh embodiment of the present invention;

Paragraph on page 6, lines 13 through 15:

[Figure 9 shows] Figures 9A through 9C show cross-sectional views of a cooling device for a heat source according to an eighth embodiment of the present invention;

Paragraph on page 6, lines 16 through 18:

[Figure 10 shows] Figures 10A through 10C show cross-sectional views of a cooling device for a heat source according to a ninth embodiment of the present invention;

Paragraph on page 6, lines 19 through 21:

[Figure 11 shows] Figures 11A through 11C show cross-sectional views of a cooling device for a heat source according to a tenth embodiment of the present invention;

Paragraph on page 6, lines 22 through 24:

[Figure 12 shows] Figures 12A through 12C show cross-sectional views of a cooling device for a heat source according to an eleventh embodiment of the present invention;

Paragraph on page 7, lines 1 through 3:

[Figure 13 shows] Figures 13A through 13C show cross-sectional views of a cooling device for a heat source according to a twelfth embodiment of the present invention;

Paragraph on page 7, lines 4 through 6:

[Figure 14 shows] Figures 14A through 14C show cross-sectional views of a cooling device for a heat source according to a thirteenth embodiment of the present invention;

Paragraph on page 7, lines 7 through 9:

[Figure 15 shows] Figures 15A through 15C show cross-sectional views of a cooling device for a heat source according to a fourteenth embodiment of the present invention;

Paragraph on page 7, lines 13 through 15:

[Figure 17 shows] Figures 17A through 17C show cross-sectional views of a cooling device for a heat source according to a sixteenth embodiment of the present invention; and

Claims:

5. The cooling device for the heat source according to claim 2 [or claim 3], wherein said upright plate provided on the downstream side of said header is provided offset from a center of said hole.
6. The cooling device for a heat source according to [any of claim 1 to claim 4] claim 1, wherein a gap between said upright plate provided on a downstream side of said header and a wall face on a side of said header opposite said holes is eliminated.
9. The cooling device for a heat source according to claim 6 [or claim 7], wherein a gap between said baffle plate provided on an upstream side of said holes within said heat sink and said wall face on a side of said heat sink opposite said holes is eliminated.